

14 to 16 between the hind limbs ; 23 to 27 femoral pores on each side.

2. Forma *typica* (N. Egypt). Subocular not bordering the mouth ; 34 to 52 (usually 38 to 43) scales across middle of body, 10 to 16 between the hind limbs ; 21 to 31 (usually 22 to 28) femoral pores on each side.

3. Var. *asper* (Palestine, Arabia, Saharan region and Soudan). Subocular not bordering the mouth, 23 to 38 (usually 25 to 35) scales across middle of body, 8 to 14 between the hind limbs ; 15 to 27 (usually 17 to 24) femoral pores on each side.

LIX.—Notes on the Ichneumonidæ in the British Museum.—I. By ROWLAND E. TURNER, F.Z.S., F.E.S.

Subfamily PIMPLINÆ.

Tribe PIMPLINI.

Certonotus tasmaniensis, sp. n.

♀. Brunneo-ferruginea ; mandibulis nigris, antennis 40-articulatis, articulis 29-38 pallide flavis ; clypeo, labro, facie lateribus late, orbitis, mesonoto macula utrinque antice maculaque magna quadrata post medium, tegulis basi, mesopleuris fascia sub tegulis macula antice, fascia angusta margine postico, maculaque angulis inferioribus posticis, scutello apice lateribusque, postscutello lateribus, segmento mediano apice late, tergitis 1-6 fascia angusta apicali, coxis apice, trochanteribus, femoribus apice, tibiis apice, tibiis posticis basi anguste, tarsisque anticis flavis ; tarsis intermediis posticisque tibiisque posticis in medio nigris ; alis subhyalinis, iridescentibus, venis fuscis ; terebra valvulisque nigris. Long. 17 mm. ; terebræ long. 17 mm. ; antennarum long 12 mm.

♀. Clypeus very short, transverse ; eyes separated from the base of the mandibles by a distance scarcely equal to half the length of the scape. Face finely and shallowly punctured, with a few delicate transverse striæ below the base of the antennæ and a groove along the inner margin of the eyes ; front microscopically punctured ; vertex smooth and shining. Pronotum not produced at the angles ; mesonotum irregularly and coarsely transversely striated, with a well-marked longitudinal lateral groove on each side ; scutellum finely punctured ; mesopleuræ shining, finely and sparsely punctured, smooth in the middle. Median segment smooth and shining,

without a basal area, with a broad upper area on each side; spiracle large and elongate, the carinæ enclosing the lower and posterior areas not very strongly defined. Abdomen smooth and shining, the emargination of the seventh tergite deep and triangular. Hind tibiæ without any trace of a fovea, but with a very minute spine. Areolet triangular; second recurrent nervure sharply bent inwards in the middle, forming a sharp angle. Nervellus geniculate and intercepted above the middle.

Hab. Fern Tree, Mt. Wellington, S. Tasmania, 1300 ft.; January 1913 (*Turner*). 1 ♀.

The antennæ are much shorter proportionately than in other species of the genus; the areas of the median segment closely resemble those of *C. similis*, Krieg., as shown in his figure; it also resembles that species in the unarmed angles of the pronotum. In colour this closely resembles *C. nitidulus*, Morl., and may possibly prove to be identical, but Morley gives no clue to the locality of the species, and his type is not in the British Museum; the length given for his species is, however, only 11 mm., and he states that there is a series of foveæ on the hind tibiæ, not a minute spine as in the present species. The spine is, however, so minute that it might easily be overlooked, but the statement as to foveæ could not correctly be applied to the present species. I have been unable to detect the spine on the hind tibiæ of *C. annulatus*, Morl., and *C. apicalis*, Morl., though in Morley's table it is said to be present in these species.

Certonotus hinnuleus, Krieg.

Certonotus hinnuleus, Krieg. Zeitschr. Hym. Dipt. i. p. 123 (1901). ♀.

I took a female of this species at Kuranda, N. Queensland, in May 1913; it answers almost exactly to the description. The specimen assigned by Morley to this species with some doubt (*Rev. Ichneum.* ii. p. 32, 1913) is utterly distinct.

Certonotus leeuwinensis, sp. n.

♂. Niger; orbitis late, genis, facie fascia longitudinali nigra, pronoto lateribus, propleuris fascia supra coxas, tegulis, scutello fascia apicali, postscutello macula, segmento mediano macula minuta apicali, tergitis 1-6 fascia angusta apicali lateribusque, tergito septimo apice trimaculato, trochanteribus anticis intermediisque, femoribus anticis intermediisque apice, tibiis anticis subtus, calcariisque albido-flavis; antennis 33-articulatis, articulis 23-31 albidis; mesonoto, lateribus nigris, propleuris, mesopleuris, segmento mediano lateribus, coxis posticis, femoribusque

rufo-ferrugineis; tarsis anticis testaceis; alis hyalinis, leviter infuscatis, iridescentibus, venis fuscis.

♀. Mari simillima; scutello in medio, segmento mediano apice, pronotoque lateribus rufo-ferrugineis.

Long., ♂, 8 mm.; antennarum long. 5.5 mm.; ♀, 8.5 mm.; terebræ long. 9 mm.

♂. Clypeus very short; face closely and minutely punctured; front and vertex smooth and shining; eyes separated from the base of the mandibles by a distance nearly equal to the length of the third joint of the antennæ. Hind angles of the pronotum scarcely prominent; mesonotum coarsely transversely striated in front, more obscurely posteriorly, the median lobe with a shallow longitudinal median groove; pleuræ closely and finely punctured. The small basal area of the median segment is much broader than long, with a much larger area broadened from the base beyond it and two large lateral areas on each side, the apical median area being rather indistinctly divided from the apical lateral areas, the whole segment minutely punctured. Abdomen slender, smooth and shining. Hind tibiæ with a minute spine at about one-third from the apex. Nervulus almost interstitial; nervellus straight, without an intercepting vein.

Hab. Yallingup, S.W. Australia, October (Turner); 1 ♂, 1 ♀. Swan River (*Du Boulay*); 1 ♀ in very bad condition. The male is the type.

This is allied to *C. hinnuleus*, Krieg., but the colour is very different and the angles of the pronotum are much less prominent and the mesonotum longer and narrower. The group is well distinguished from others of the genus by the neuration of the hind wing.

Tribe LISSONOTINI.

Phytodietus celsissimus, sp. n.

♀. Nigra; antennis fusco-ferrugineis, articulis 10 basalibus nigris; pedibus anticis intermediisque rufo-testaceis, coxis flavis; mandibulis, apice excepto, clypeo, facie in medio latissime, macula parva utrinque oculos vix attingente, orbitis internis prope ocellos, mesonoto macula parva post medium, tegulis, mesopleuris macula parva sub alis, scutello antice lateribusque nigro-sinuato, postscutello in medio, metapleuris macula elongata, segmento mediano fascia transversa apicali in medio interrupta, coxis posticis macula basali, trochanteribus posticis, femoribus posticis basi atque apice angustissime, tibiisque posticis basi anguste flavis; segmentis abdominalibus 1-7 fascia angusta apicali albido-flava; alis subhyalinis, iridescentibus, stigmatibusque fuscis.

Long. 8 mm.; terebræ long. 3 mm.; antennarum long. 8 mm.

♀. Antennæ 39-jointed, the third joint half as long again as the fourth. Clypeus and face very finely and closely punctured, the upper part of the face with a deep longitudinal groove on each side near the inner orbits. Front, vertex, and thorax subopaque, smooth; the parapsidal furrows distinct anteriorly; median segment only half as long as the mesonotum, without carinæ, the spiracles small and round. Abdomen smooth and shining, the apical segments minutely punctured on the sides; first tergite about half as long again as its apical breadth, longer than the second segment, second tergite narrowed to the base. Hypopygium not reaching the apex of the abdomen. Valvulæ reddish brown at the extreme apex. Areolet triangular, very shortly petiolate; the inner side of the areolet straight, forming a right angle with the cubitus; the recurrent nervure received close to the apex of the areolet. Nervulus interstitial; nervellus intercepted far below the middle. Tarsal ungues pectinate.

Hab. Mt. Wellington, S. Tasmania, 2300 ft., March 25, 1913 (*Turner*); 1 ♀.

The second tergite is longer and more narrowed to the base than in *P. coryphæus*, Grav., and other Palæartic species, the first tergite is also much more slender; otherwise the species does not differ in any important structural point. In these points it comes very near to *P. astutus*, Grav., which appears to be its nearest ally.

Tribe XORIDINI.

Xylonomus crudelis, sp. n.

♀. Nigra; facie, antennis articulis 11-18, orbitis late ocellum anteriorem non superantibus, vertice macula magna orbitali utrinque, propleuris postice latissime, mesopleuris postice late, scutello macula magna quadrata, postscutello macula transversa, segmento mediano macula triangulari utrinque angulis basalibus, segmento abdominali primo basi, segmentis 1-7 fascia apicali, coxis anticis intermediisque supra, tarsisque posticis, articulo apicali excepto, albidis; terebra pedibusque testaceis, posticis trochanteribus, tibiis apice, tarsisque articulo apicali nigris; alis hyalinis, iridescentibus, venis fuscis, stigmatibus basi albomaculato. Long. 7 mm.; terebræ long. 4 mm.

♀. Clypeus very short, finely punctured; face smooth and shining. Antennæ 24-jointed, joints 3-6 subequal, the five apical joints inserted at a sharp angle to the preceding joints. Eyes parallel on the inner margin; head smooth and shining, cubical and not narrowed behind the eyes. Mandibles short, simple at the apex, not bidentate, eyes separated from

the base of the mandibles by a distance distinctly greater than the basal breadth of the mandibles. Pronotum produced into a distinct acute spine on each side; mesonotum shining, sparsely punctured, notauli deep and crenulate. Median segment with an elongate and rather narrow median area, which is bordered by a transverse carina a little before one-third from the apex of the segment, the basal portion of the area narrowed from the base and strongly contracted at about one-third from the base, the apical portion (or areola) elongate-ovate, truncate at the apex, petiolar area broader than long, lateral carinae well marked; spiracles small and rounded; sides of the segment rugose, produced into a short spine on each side at the apical angles. Abdomen opaque, the dorsal surface very finely and closely punctured-granulate; the first segment petiolate at the base, about three times as long as its apical breadth; second and third tergites with an oblique sulcus on each side from the base to the middle of the lateral margin, and also with an indistinct curved depressed line on each side from the middle of the base to the middle of the lateral margin. Nervulus slightly prefurcal; second recurrent nervure strongly curved outwards and joining the cubitus distinctly beyond the transverse cubital nervure; nervellus elbowed and intercepted close to the middle.

Hab. Kuranda, N. Queensland, May 3-June 20, 1913 (Turner); 1 ♀.

Closely allied to *X. abaddon*, Morley, from Assam, but differs in the colour, especially in the broad interruption of the white of the outer orbits and the apically black median segment, in the narrower first abdominal segment, and in the much less strongly impressed second and third tergites.

Subfamily OPHIONINÆ.

Tribe ANOMALINI.

Exochilum perniciosum, sp. n.

♀. Ferruginea; capite, antennis, prothorace, mesonoto, mesosterno, scutello basi, tibiis posticis dimidio apicali metatarsisque posticis dimidio basali nigris; mandibulis, apice ferrugineis, palpis, facie, orbitis internis infra, orbitis externis linea angusta in parte superiore, vertice macula orbitali utrinque, coxisque anticis flavis; pedibus anticis intermediisque tarsisque posticis, basi excepta, flavo-ochraceis; alis subhyalinis, iridescentibus, venis fuscis.

Long. 14 mm.; antennarum long. 9 mm.

♀. Clypeus and front rather strongly punctured; clypeus subtruncate at the apex; the face with a shallow longitudinal

groove on each side; mandibles bidentate at the apex. Third joint of the antennæ twice as long as the fourth; front rather coarsely rugose, vertex closely punctured. Eyes convergent towards the clypeus, very narrowly separated from the base of the mandibles. Mesonotum very closely rugosely punctured; propleuræ and mesopleuræ closely punctured, the latter rather coarsely reticulate above. Median segment coarsely reticulate, longitudinally depressed in the middle, with lateral marginal carinæ. Abdomen very slender, compressed laterally from the middle of the second segment; first segment very long, the second shorter than the first but nearly twice as long as the third. Basal joint of the hind tarsus a little more than twice as long as the second joint. Second recurrent nervure not interstitial with the transverse cubitus nervure; the external cubital nervure not in a line with the internal; nervulus distinctly postfurcal; nervellus intercepted close to the middle.

Hab. Yallingup, S.W. Australia, October (Turner);
2 ♀ ♀.

Allied in neuration to *E. scaposum*, Morley, from Queensland, but differs in the black scape, in the somewhat shorter antennæ, and in the ferruginous colour of the median segment and mesopleuræ. In both species the brachial cell is as long as the discoidal. The only other Australian species known to me in which the neuration is similar is *E. atrichiosoma*, Morley, which is closely allied. The hind metatarsi in the present species are shorter than in *scaposum* or *atrichiosoma*. I do not understand why Morley separates these two species so widely in his table; his statement that the "submarginal nervure is opposite or scutellum pale" in *atrichiosoma* is not accurate. In the other Australian species described by Morley under *Erochilum* the discoidal cell is longer than the first brachial, and in *E. australasiæ*, Morley, the second recurrent nervure is interstitial with the transverse cubital nervure, and the external and internal cubital nervures also continuous, thus contradicting the statement in Morley's table "submarginal nervure antifurcal." I have no doubt that *E. australasiæ* has been placed in the wrong genus; it answers well to the characters of *Habronyx*, Först.

Habronyx australasiæ, Morley.

Erochilum australasiæ, Morl. Revis. Ichneumon. ii. p. 75 (1913).

Trichomma elegantula, sp. n.

♂. Niger; mandibulis, apice excepto, clypeo, facie, orbitis late, scapo subtus, linea ante alas, macula parva infra alas, tegulis, scutello, coxis, trochanteribusque, posticis supra ferrugineis, flavis; pedibus anticis intermediisque, tibiis posticis prope basin late, tarsisque posticis articulis tribus basalibus flavo-ochraceis; abdomine lateribus, segmento primo apice, femoribus posticis, tibiisque posticis basi extrema ferrugineis; alis hyalinis, venis fuscis, stigmatate pallide testaceo.

Long. 8 mm.

♂. Clypeus not distinctly divided from the face; eyes strongly convergent towards the clypeus; face slightly convex, almost smooth, orbits smooth and shining; eyes almost touching the base of the mandibles. Antennæ about 30-jointed, 5 mm. in length; front finely obliquely rugulose; vertex smooth and shining; eyes as far from the posterior margin of the head as from the posterior ocelli. Mesonotum very closely and rather finely punctured, without notauli; mesopleuræ delicately longitudinally striate; scutellum smooth and shining. Median segment coarsely rugose-reticulate, with a shallow longitudinal groove from near the base to the apex, an obscure longitudinal carina on each side laterally, the sides of the segment coarsely reticulate. Abdomen long and very slender; first segment slightly swollen at the apex, scarcely as long as the second, which is linear, the segments from the third onward strongly compressed laterally. Hind femora slender at the base, reaching their greatest thickness at about two-thirds from the base. Subdiscoideus originating just above the middle of the apical margin of the first brachial cell; nervulus very slightly postfurcal; nervellus straight, without an intercepting nervure.

Hab. Kuranda, N. Queensland, May-June 1913 (*Turner*);
2 ♂ ♂.

This is much smaller than the New Guinea species *T. clavipes*, Krieg., and differs in details of colouring, especially in the face and hind tarsi, but in sculpture and neuration there seems to be little difference. I have not seen *T. clavipes*.

Tribe CAMPOPLEGINI.

Nothanomalon meridionalis, sp. n.

♀. Nigra; palpis pedibusque anticis intermediisque ochraceis, coxis nigris; segmentis abdominalibus primo apice, secundo subtus lateribusque, tertio, quarto quintoque omnino, sexto

subtus, terebra pedibusque posticis, coxis exceptis, brunneo-ferrugineis; valvulis ochraceis, apice nigris; alis hyalinis, stigmatate venisque nigris; scapo subtus ferrugineo.

Long. 17-19 mm.; antennarum long. 10 mm.

♂. *Feminæ simillimus, alis leviter infuscatis.*

♀. Clypeus, face, and front finely punctured-rugose; vertex opaque, microscopically punctured. Eyes narrowly separated from the base of the mandibles; very little further from each other on the vertex than on the clypeus, widely subemarginate on the inner margins. Antennæ 54-jointed, the third joint distinctly longer than the fourth. Mesonotum very closely and not strongly punctured; notauli shallow, only developed anteriorly; mesopleuræ closely punctured, with a few striæ posteriorly above, the hind margin above smooth and shining; scutellum finely punctured, broadly rounded at the apex. Median segment very long, produced posteriorly as far as the apex of the hind coxæ, rugulose, sparsely covered with white pubescence, deeply longitudinally depressed in the middle; spiracles small and elliptic. Abdomen elongate, laterally compressed; the first segment swollen at the apex and distinctly shorter than the second. Areolet petiolate; second recurrent nervure strongly bent inwards in the middle; nervulus very slightly postfurcal; nervellus straight, not intercepted.

Hab. Eaglehawk Neck, S.E. Tasmania, February 1913 (*Turner*); 1 ♂, 1 ♀. Mt. Wellington, Tasmania, 2300 ft., April 2-6, 1913 (*Turner*); 2 ♀ ♀.

This genus was founded by Szépligeti for a New Guinea species. It is remarkable that I did not take any species of the genus in North Queensland.

Subfamily CRYPTINÆ.

Tribe CRYPTINI.

Mansa volatilis, Sm.

Cryptus volatilis, Sm. Journ. Proc. Linn. Soc., Zool. vii. p. 7 (1863). ♀.

Subsp. *fumipennis*, nov.

♀. Differs from the typical Austro-Malayan form in the colour of the wings, the fore wings being crossed by a broad pale fuscous cloud from the stigma to the anal angle, occupying the whole of the second discoidal and second brachial cells. The stigma is margined with black, not wholly fulvous as in *volatilis*.

Hab. Kuranda, N. Queensland, February 1902 (*Turner*); 1 ♀.

The name *Colganta*, Cam., must sink as a synonym of *Mansa*, as pointed out by Morley.

Cryptus exul, sp. n.

♀. Nigra; antennis 32-articulatis, basi rufo-testaceis; articulis 6-10 albido-flavidulis; articulis apicalibus nigris; mandibulis in medio, clypeo, orbitis, segmentis abdominalibus quinto sequentibusque, aliquando quarto etiam, femoribus, tibiisque rufo-ferrugineis; tarsis posticis articulis secundo tertio quartoque flavescens; stigmatibus basi tegulisque albo-flavidulis; alis hyalinis leviter infumatis, venis fuscis.

♂. Femine similis; antennis nigris, scapo flavo-testaceo; segmento abdominali quarto aut toto aut dimidio apicali rufo-ferrugineo.

Long., ♀, 9 mm., terebræ long. 3 mm.; ♂, 8 mm.

♀. Antennæ filiform, the apical joint strongly excavated beneath; third and fourth joints about equal in length. Clypeus truncate at the apex; mandible short, ending in two equal teeth. Face closely and finely punctured; front and vertex opaque, finely shagreened. Mesonotum deflexed anteriorly, finely shagreened; the parapsidal furrows distinct, but very shallow; pleuræ finely granulate. Median segment with two transverse carinæ, both somewhat arched in the middle, the basal portion of the dorsal surface before the first carina subopaque and almost smooth; the apical and smaller portion between the two carinæ finely longitudinally striate-rugulose; the posterior angles produced into a stout, rounded, lamelliform spine on each side; spiracles small and round; the apical slope finely granulate. Abdomen smooth and shining; second tergite as long as its apical breadth; valvulæ broad and flattened. Areolet rather large, the transverse cubital nervures parallel, the cubital margin slightly bent in the middle at the point of reception of the recurrent nervure. Outer angle of the discoidal cell blunt; nervulus interstitial; nervellus intercepted far below the middle.

♂. Apical antennal joint not excavated beneath; spines at the apical angles of the median segment absent; first tergite long and slender, second nearly twice as long as its apical breadth.

Hab. Mt. Wellington, S. Tasmania, 2300 ft., March 12-April 6, 1913 (*Turner*); 9 ♀♀, 10 ♂♂.

This is not a typical *Cryptus*, differing in the small round spiracles of the median segment and the parallel-sided areolet. The lamelliform spine at the apical angles of the median segment is a sexual character in this species.